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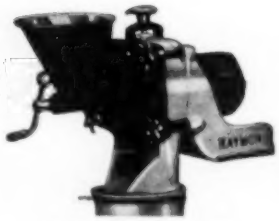

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Technical Briefs

Sulfur in Soil Rot Control

Soil rot, an important disease of sweet potatoes in sandy soils of southeastern Iowa, has been controlled effectively by sulfur as a soil treatment. The disease (*Streptomyces ipomoea*) reduces both stands and plant vigor and fleshy roots are disfigured and distorted by its attacks. Following the sulfur treatment, total yields and plant vigor are often increased and the appearance of the fleshy roots was appreciably improved. Although disease was present in soils with pH as low as 4.7, practical control was usually obtained somewhere around pH 5.0. In these soils, total yields and plant vigor were adversely affected at approximately pH 4.0.

The 800 lb. sulfur rate provided conditions for optimum plant growth and satisfactory disease control. Maximum soil rot control was obtained with 1200 lbs. of sulfur, but in certain locations this rate was above the optimum for plant growth. Disease control was not satisfactory with 400 lbs. of sulfur.

There was no evidence that stem rot (*Fusarium oxysporum* f. *batatas*) had been influenced by variation in hydrogen-ion concentration of the soil.

Summary of "Sulfur Soil Treatment for Control of Sweet Potato Soil Rot Incited by Streptomyces Ipomoea," by W. J. Hooker and Lewis E. Peterson, in Phytopathology, November, 1952.

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Malathon for Two Pests

Successful control of greenhouse mealybug and the Euonymus scale with malathon has been reported by the Connecticut Agricultural Experiment Station, New Haven. John C. Schread, entomologist, found that malathon gave a 100% kill of young and adults when 1 quart of 50% emulsion in 100 gallons of water was used. A pressure sprayer was used in the experiments. The application was made when few eggs were present and no repeat treatment was necessary, since none of these eggs hatched. Had a large number of eggs been present, it was regarded likely that a second treatment could have been necessary.

In the case of scale infesting young Euonymus plants in the greenhouse, higher dosages were necessary. Malathon gave satisfactory control at a concentration of 1 gallon of emulsion in 100 gallons of water.

When sprays were applied two weeks after the young had hatched, crawlers were nearly all killed with sprays of 1 pint of malathon emulsion in 100 gallons of water. A second treatment was necessary about a week after the first. In cases of unusually severe infestation, a third treatment may be advisable.

No phytotoxic effects were noted in the Connecticut experiments, the report stated.

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Spittlebug Control

Insects, including leafhoppers, spittlebugs, and weevils, have been lowering both the tonnage and nutritional value of alfalfa by as much as 50 per cent, according to Dr. R. P. Holdsworth, Jr., E. I. Du Pont de Nemours & Co., Inc., in a talk before a convention of the American Dehydrators' Association, which closed January 14 in Phoenix, Ariz. He reported having seen severe damage to alfalfa crops being blamed on drought or boron deficiency, when the damage was actually caused by the leafhopper.

More than a half-million acres of forage crops were sprayed with insecticides in five eastern and middle-western states during the summer of 1952 to control these tiny pests, it was reported. Spraying early alfalfa growth to control spittlebug

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